DISTRICT OF COLUMBIA
PUBLIC SCHOOLS

CHANCELLOR'S NOTES

Chancellor Rhee's regular newsletter on learning, schools and system-wide reforms in DC Public Schools

May 5, 2010

DC Students Show Progress in Science

Barnard Elementary School, Ward 4
Photo by Michael DeAngelis

Last week my daughter turned me and a few colleagues into subjects in her science project, as she attempted to test whether gender and age influence our sense of smell.

A few weeks before that, two of our students, one at Benjamin Banneker High School and one at School Without Walls, beat out 67 others to compete in the International Science and Engineering Fair. A seventh grader at Stuart Hobson Middle School won first place in her division for her project on the effect of radiation on plants.

Wilson High School at FIRST National Robotics Championships in Atlanta

Cardozo High School girls recently spent the afternoon lobbying Congress to press for more challenges in science for girls, and students from Woodrow Wilson High School put their skills in robotics on display at the FIRST National Robotics Championships in Atlanta.

Children of every age are naturals at scientific exploration. They are full of ideas, hungry for a challenge, and eager to test their theories about the physical world.

Science teachers in DC are seizing on this natural curiosity, and we have some good news to report as a result. We released the 2009 results in science proficiency as measured by the DC Comprehensive Assessment in Science (DC CAS).

Here is what we found:

District-Wide Accomplishments

- In grades five and eight combined, 33 percent of students across the city scored proficient or advanced, an increase of six points from 2008.

- Among students scoring proficient or advanced, fifth graders gained three percentage points from the previous year, and eighth graders gained eight.

- Students with disabilities nearly doubled their proficiency rates.

- More fifth and eighth grade students have increased knowledge of science and biology. The percent of students scoring below basic decreased by five points from 2008 to 2009.

Individual School Accomplishments

- More good news is coming from Noyes Education Campus, where student proficiency in science increased by 40 percentage points.

- At Ross Elementary School, proficiency increased by 35 percentage points, at Tyler Elementary School, 31, and at Janney Elementary School, 18.

- Congratulations also to overall high performers in high school: School Without Walls (99 percent proficient) and Benjamin Banneker (94 percent proficient)!

Last year was only the second year that these results have been tracked in this critical subject, and overall proficiency shows we still have a lot of work to do. Nationally, students in the United States have some catching up to do. For example, China graduates four times as many engineers as the U.S., and American students are measurably less excited about entering math and science fields.[i]

However, the encouraging growth we are seeing in science in Washington tells me that our principals, teachers and students can turn those statistics around.

What Next?

With a new focus on science education, in future years DCPS aims to provide a competitive response to the growing global demand for graduates who are skilled, innovative and poised to create the next cutting-edge solutions in the sciences.

In a few important ways, we are responding to the need to hone in on high quality science education in the District of Columbia.

Science, Technology, Engineering and Math (STEM) Schools

- Replicating success: When McKinley Senior High School opened, it was the first Science, Technology, Engineering and Math (STEM) school in the district. It is now one of our most successful high schools, and we are replicating this model by creating more STEM schools across the district.

  STEM schools are part of a larger Catalyst project, which is introducing themed schools across the District with a specialized focus on STEM, the Arts, or World Cultures. We are eagerly anticipating opening a new Woodson Senior High School as a STEM School next year as well.

- Giving students marketable skills: In addition to emphasizing these content areas within a full curriculum, STEM schools strengthen the skills that employers are looking for: problem-solving, leadership, teamwork, and innovation.

- Teachers keeping current through professional development: In some of these fields, even college majors can expect what they learn freshmen year to be outdated before they graduate. We have to keep up with these changes in K-12 education as well, and teachers at STEM schools prioritize keeping up-to-date through STEM-driven professional development.

- Holding ourselves accountable: Now that we are using DC CAS data to track science progress, we will also use this data to understand our starting points, progress through instruction, and set ambitious goals for future performance.

We are confident that these results represent just the beginning of what our teachers and students will do in the sciences. With perseverance, we can become competitive with the best schools in the area.

Congratulations!

Kudos, three cheers, and good job to our students and educators! There are so many advances to come in science education here in DC. Thank you to all our educators and parents for the tremendous work you are doing to encourage students' questions, guide children to find the answers, and ensure that all students can benefit from the opportunities that science has to offer.

[i] U.S. Department of Education, National Center for Education Statistics and Tapping America's Potential, www.tap2015.org

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